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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/731,510 | 12/09/2003 | Zhenwen Fu | A01483 | 3733 |

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EXAMINER

FAISON, VERONICA F

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| ART UNIT | PAPER NUMBER |
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1755

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,510

Applicant(s)

FU ET AL.

Examiner

Veronica F. Faison

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 4-6, 9, 10 and 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

Claims 1 and 7 have been amended and claims 11-16 have been added. Hence, claims 1-16 are pending in the application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Loftin et al (US Patent 5,512,623).

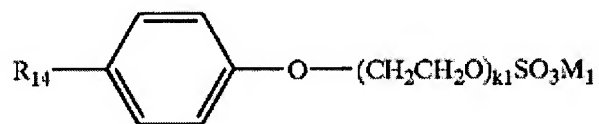
Loftin et al teach an aqueous marker ink comprising a surfactant, a pigment, a film-forming polymer and water (abstract and col. 1 lines 26-28). The reference further teaches that the surfactant (amphiphilic material) may be an alkyl phenol ethoxylated surfactant wherein octyl phenol ethoxylated (i.e. Triton X-100) is preferred (col. 1 lines 34-37, col. 2 lines 39-44 and examples). The alkyl phenol ethoxylated surfactant taught by the reference is the same as Applicant's structure $XQ_n-R'-Y-R$ as Applicant teaches on page 3 lines 3-7 of the specification that alkyl phenol ethoxylates are amphiphilic

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material of the formula $XQ_n-R'-Y-R$. The composition as taught by Loftin et al appears to anticipate the claimed invention.

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Momose (US Patent 6,749,675).

Momose teaches an ink composition comprising at least a colorant, water, 0.005 to 10 percent by weight of at least one acetylene alcohol and a surface active substance (amphiphilic material) such as formula 21(d) as seen below:



wherein k_1 is 1 to 30 and M_1 is an alkali metal or a base such as ammonium, which is Applicant's claimed structure $R-O-Q_nA^+M^+$. The reference further teaches that the formula 21 d may be ammonium polyoxyethylene nonyl phenyl ether sulfate (amphiphilic material), which is used in example 1-4 of Table 8 and present in the amount of 1 percent by weight that is within Applicant claimed range (abstract, col. 2 lines 5-54, and col. 6 lines 4-15). The reference teaches the colorant may be a dye or pigment and that the pigment may also be a surface-treated pigment being surface treated with a functional group such as sulfone, carbonyl carboxyl, hydroxyl and amino (col. 10 line 30-col. 11 line 36). The colorant used in example 1-4 is a Cabojet 300, which is a surface-modified pigment (Table 8). The composition as taught by Momose appears to anticipate the claimed invention.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Momose as applied to claims 1-2 above.

Momose fails to specifically exemplify wherein n is 11 and 30, as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the specific n values (i.e. 11 and 30) as claimed by applicant as Momose also discloses the use of k1 (n) is a value of 1 to 30 but shows no example incorporating k1 as 11 or 30.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanke et al (US Patent 5,466,281).

Hanke et al teach an ink composition comprising a polar non-aqueous liquid, water and a colorant, which may be a dye or pigment (abstract and col. 3 lines 32-42). The reference further teaches that wetting agent may be present in the ink composition that include surfactants such as sodium lauryl sulfate (amphiphilic material) present in the amount of 0.10-1 percent by weight (col. 6 lines 33-51). Hanke et al fails to specifically exemplify the use of sodium lauryl sulfate (amphiphilic material) as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the sodium lauryl sulfate (amphiphilic material) as claimed by applicant as Hanke et

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Hanke et al also discloses the use of sodium lauryl sulfate (amphiphilic material) but shows no example incorporating them.

Allowable Subject Matter

Claims 4-6, 9, 10, 13, and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The references alone or in combination fail to teach an ink composition comprising both amphiphilic materials $R-O-Q_nA^+M^+$ and $XQ_n-R'-Y-R$.

Conclusion

The remaining references listed on form 892 have been reviewed by the Examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VFF
3-19-05


J.A. LORENGO
PRIMARY EXAMINER